

Abstract of the Disclosure

A multi-loop oscillator which can control variation of an oscillating frequency of a ring oscillator according to variation of a supply voltage is disclosed comprising: first to Nth delay loops, wherein oscillation signal having a predetermined period is generated by selecting one of first to Nth delay loops according to potential variation of a supply voltage. Herein, the multi-loop oscillator further comprises a loop selection section for selecting one loop from among the first to the Nth delay loops, according to potential variation of the supply voltage. Further, the multi-loop oscillator further comprises a supply voltage detection circuit section for detecting variation of the supply voltage, and the supply voltage detection circuit section controls an operation of the loop selection section. In the multi-loop oscillator, an oscillation frequency of the ring oscillator can be adjusted. Accordingly, when the ring oscillator is employed, an abnormal operation of a pumping circuit operating in response to an oscillation signal of the ring oscillator can be considerably reduced.